

## 8-4 Skills Practice

### Polynomials

IF NEAT, #1-20 can be DONE ON THIS WORKSHEET.

State whether each expression is a polynomial. If the expression is a polynomial, identify it as a *monomial*, a *binomial*, or a *trinomial*.

1.  $5mn + n^2$

2.  $4by + 2b - by$

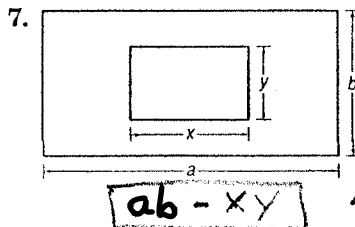
3.  $-32$

4.  $\frac{3x}{7}$

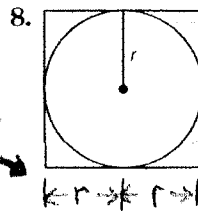
5.  $5x^2 - 3x^{-4}$

6.  $2c^2 + 8c + 9 - 3$

**GEOMETRY** Write a polynomial to represent the area of each shaded region.



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Find the degree of each polynomial.

9.  $12$

10.  $3r^4$

11.  $b + 6$

12.  $4a^3 - 2a$

13.  $5abc - 2b^2 + 1$

14.  $8x^5y^4 - 2x^8$

Arrange the terms of each polynomial so that the powers of  $x$  are in ascending order.

15.  $3x + 1 + 2x^2$

16.  $5x - 6 + 3x^2$

17.  $9x^2 + 2 + x^3 + x$

18.  $-3 + 3x^3 - x^2 + 4x$

19.  $7r^5x + 21r^4 - r^2x^2 - 15x^3$

20.  $3a^2x^4 + 14a^2 - 10x^3 + ax^2$

Find each sum or difference.

8-5

#1-10 ON LOOSE LEAF

1.  $(2x + 3y) + (4x + 9y)$

2.  $(6s + 5t) + (4t + 8s)$

3.  $(5a + 9b) - (2a + 4b)$

4.  $(11m - 7n) - (2m + 6n)$

5.  $(m^2 - m) + (2m + m^2)$

6.  $(x^2 - 3x) - (2x^2 + 5x)$

7.  $(d^2 - d + 5) - (2d + 5)$

8.  $(2e^2 - 5e) + (7e - 3e^2)$

9.  $(5f + g - 2) + (-2f + 3)$

10.  $(6k^2 + 2k + 9) + (4k^2 - 5k)$

11.  $(x^3 - x + 1) - (3x - 1)$

12.  $(b^2 + ab - 2) - (2b^2 + 2ab)$